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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/509,138

04/08/2005

Werner Jaeger

127-75824

1950

23643 7590 06/17/2008
BARNES & THORNBURG LLP
11 SOUTH MERIDIAN
INDIANAPOLIS, IN 46204

EXAMINER

MULLIS, JEFFREY C

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

06/17/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/509,138	Applicant(s) JAEGER ET AL.	
	Examiner Jeffrey C. Mullis	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 21 and 22 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. These claims do not recite any process steps and therefore appear to be drawn to a use which is non statutory.

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Claims 1 and 3-22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification as filed does not disclose how to make polymers which "consist of" units "I" and "II" in that all polymers have terminating moieties which appear to be excluded by "consist of". The limitation of "consist of" is therefore new matter in the context of the claims.

Claims 1 and 3-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims recite polymer which "consist of" units "I" and "II" which are not terminating moieties despite the fact that terminal groups are necessarily present "n any polymer. However the term "consist of" excludes terminal moieties.

Claim 21 is unclear in that the preamble recites a method of making a coagulating or flocculating agent but otherwise recites no actual process steps of making the agent

and it is therefore unclear what process steps are encompassed. Claim 22 similarly recites no actual process steps pertinent to the process in the preamble.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-16 and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neff et al. (US 5882525) in view of (US 4713431, admission at page 1, lines 29-33 of the specification).

Patentees disclose a polymer which may contain applicants monomers "I" at column 4, lines 47-58 and 4-80 parts per million of a "branching agent" (see the paragraph bridging columns 3 and 4) such as PEGDMA of molecular weight of 600 (see experiments 10-11 in column 9). The materials may be used as flocculants agents for effluent in the treatment of sludges at column 1, lines 10-39.

There are no examples of a material produced by using patentees diallyl ammonium compounds in combination with applicants amounts of PEG dimethacrylate although patentees disclose that applicants amounts of branching agent which include PEGDMA may be used in amounts encompassing applicants' in combination with monomers including applicants. Hence it would have been obvious to a practitioner having an ordinary skill in the art at the time of the invention to select applicants components in

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applicants amounts from the disclosure of the patent in the expectation of adequate results absent any showing of surprising or unexpected results.

Patentees do not appear to disclose inverse emulsion polymerization as required by certain dependent claims. However page 1, lines 29-33 of applicants specification discloses that the advantage of inverse emulsion polymerization is known in the art for increasing molecular weights of flocculating polymers. Hence use of inverse emulsion polymerization would have been obvious to a practitioner having an ordinary skill in the art at the time of the invention to confer the advantage of increased molecular weight absent any showing of surprising or unexpected results.

Applicant's arguments filed 3-24-08 have been fully considered but they are not persuasive.

With regard to claims 21 and 22, a process step requires some sort of action and an overall view of applicants specification indicates that by "replacing" in the context of claims 21 and 22 does not mean that one unit is removed and another put in its place. Similarly the term "providing" does not encompass any action.

Chain transfer agents function by providing a moiety to the free radical center at the chain end of a propagating macromolecular chain to simultaneously terminate the chain and generate another free radical for initiating another chain. The moiety of the chain transfer agent which is often no more than a hydrogen radical therefore will combine with the chain end and would appear in the final product. Applicants' polymers also have terminal groups which are not shown in the structure of the claims and in fact the open valences of structures "I" and "II" provide points of attachment for applicants

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terminal groups where units "I" at "II" are at terminal positions. Any polymer has terminal moieties and applicants are no exception. Applicants terminal moieties are not shown and thus the claims are unlimited as to the terminating group, the term "consist of" notwithstanding. Since applicants claims are not limited as to the terminal group it is immaterial that patentees' terminal groups arise from chain transfer agents. The material "Q-9" is not multifunctional with regard to free radical polymerization and could not act as a branching agent nor is it disclosed as a branching agent by patentees. With regard to the use of chain transfer agents, for the reasons set out above, applicants are relying on limitations not present in the claims

Any inquiry concerning this communication should be directed to Jeffrey C.

Mullis, M-F, 9-5 pm at telephone number 571 272 1075.

Jeffrey C. Mullis
Primary Examiner
Art Unit 1796

JCM

6-13-08

/Jeffrey C. Mullis/

Primary Examiner, Art Unit 1796